Bridge Culvert Inspection

Bridge File Number	73156 -1 Bridge Culvert	Form Type	CUL1
Year Built	1960	Lot No.	4
Bridge or Town Name	AIRDRIE	Inspector Name	Garry Roberts
Located Over	TRIBUTARY TO NOSE CREEK, 2.13.32.5, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	567:04 C1 7.469	Assistant Class	
Water Body Cl./Year		Inspection Date	25-Jul-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	NE SEC 10 TWP 27 RGE 1 W5M	Data Entry Date	30-Aug-2012
Longitude, Latitude	-114:03:31, 51:18:00	Reviewer Name	Tom Carey
Road Authority	Alberta Transportation (AIT)	Review Date	07-Aug-2012
Contract Main. Area	CMA29	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	9.3 /	Dept. Review Date	06-Sep-2012
AADT/Year	2,240 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2000	MP	37.8	68X13	2.8	ROUND
Special Features								
Special Features Comment	CSP liner in original SPCSP.							

Utilities (Located at)

Utility Attachments			
Telephone	South ditch.	Gas	
Power	North ROW.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Curve to East. Hills East and West. Entrance 100m West.
Vertical Alignment		5	5	
Roadway Width (m)	9.300			
Embankment		5	5	Steep slope side at South side.
Sideslope (__:1)	1.1			
(Height of Cover(m) : **4.8**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		North.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		7	7	Steel plate bulkhead.
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	6	
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	150			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2000, Type: MP**)				
Barrel Last Accessible Date	25-Jul-2012			
Special Features				
Special Feature				Barrel is 2000 mm MP liner in original 2450 mm SP. Barrel deformed (bulge) from 7.0 m to 11.0 m from U/S from installation.
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	
Measured Rise (mm)	1722			
Measured At Ring No.				
Sag (mm)	278			
Percent Sag	12			
Sidewall		5	5	Measured diagonally & marked - no change diagonal.
Measured Span (mm)	2252			
Measured At Ring No.				
Deflection (mm)	252			
Percent Deflection	12			
Floor		5	5	Localized bulging from installation and grouting.
Bulge (mm)	250			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	Welded.
Separation (mm)	0			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		6	6	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2000, Type: MP**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	D/S 1/2 silt up to 300mm deep.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	General rating roof & sidewall rating raised from 3 to 5 due to distortion as built and liner encased in concrete no change from last inspection.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		South.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		7	7	Steel plate bulkhead.
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	5	Wide shallow scour hole @ D/S.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				NO HWM VISIBLE.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

Maintenance Recommendations						
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**62.7/61.0**	Est. Repl. Yr	2035	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection		Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy					
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	25-Oct-2015	Previous Inspection Date	14-May-2009		
Inspection Cycle (Default) (months)	39				
Comment					